

Monotonicity and functional inequalities for certain classes of special functions

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In this, we present some new functional inequalities such as Turán type inequalities, Redheffer type inequalities and a Mittag-Leffer expansion for a special combination of modified Bessel functions of first kind, called the modified Dini functions (see [3]). Moreover, we study the monotonicity patterns for cross product of Bessel functions. In addition, we show the interlacing property of zeros of Dini functions and cross product of Bessel functions. The key tool in our proofs is based on the recently developed infinite product representation for Dini functions and cross product of Bessel functions [1, 2].

References

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